

CHEMSTAR LIME

PLANT COMMUNITY SURVEY

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Site:

Chemstar lime property west of Grantsville Utah. Elevation 4775 feet above sea level.

This site is characterized by the following plants.

Big Sage (*Artemesia tridentata*)

3-Awn grass (*Aristida* sp)

June Grass (*Bromus tectorum*)

Globe Mallow

Shadscale

Rabbit brush

Russian Thistle

Juniper

The survey area began 200 yards west of the 4775 foot elevation marker on the top of the pit area. It extended 1000 feet west and was sampled every 50 feet for plant density. An estimate of the cover on one square yard was made for every sample. The totals were then averaged for the final average percent cover on the entire transect. Grasses were estimated as a percent of the total and forbs or rock or bare soil was also noted in each sample.

A random sample of 600 feet transect was sampled to validate the sample area. An area of 20 acres was sampled to estimate the amount of grazing that had occurred. Grazing was noted in less than 0.1% of the area. Cattle movement was detected by tracks and some droppings, however, the grazing was not on the cattle track area. The ground would provide a winter range and more grazing could be a factor in the winter.. Grazing is estimated to be by deer, again estimated by tracks and droppings.

RESULTS:

Disturbed ground had the largest percentage of non-native species. June grass was found in the disturbed areas and not on the native areas. Sage was 50% dead, which appeared to be by fire.

Transect #1

1. 80% cover
2. 60% cover
3. 40% cover
4. 40% cover Three plants 3-awn, 1 small sage <12 " tall.
5. no cover - limestone rock 3'x10'
- 6 10% cover
7. 20% 2 small rabbit brush 6", 1 dead sage 10", 2 forbs
8. 25% cover 3 grasses 10", 2 forbs 6", 1" dia clump
9. 40% cover- 2 sage 10" tall, 4 forbs
10. 5% cover 2 rabbit brush 5" , bare ground
11. 80% cover curly grass, 5% rock
12. 10% cover - 1 grass, 3 forbs 4"
13. ID BLACK stake. 30% cover, 25% rock/soil 4 curly grass 8"
14. 60% cover(grasses) 20% bare rock
15. 75% cover(2 sage plants 6")
16. 35% forbs 1" tall 60% soil 5% rock
17. 50% cover, 1 grass plant
18. 40% cover
19. 20% cover grass
20. 80% cover - grass 10", 1 sage 16"
21. 10% cover - 1 grass
22. 10% cover - 1 sage 14"

Estimate of the 20 acre site,

10% sage, <2.5' tall

40% sage, 16" tall

50% sage dead

<0.1% grass - grazed as noted by clipping

0.1% grass - June grass - only on disturbed areas

Junipers, 16 plants were 12-14' tall

Junipers 2 plants were 2' tall

Junipers 2 plants were 3' tall

When observed from a distance, the ground appears to be fully covered with grass. However, upon inspection, the average total cover is 34.5% grasses, forbs, or brush, and the rest is bare ground or rock.. The #1(1000') transect had no juniper on it; grasses and forbs were the primary plants. The 20 acre site had few junipers.

The community was not substantially different from other plant communities on the desert. Limited water probably contributed more to the sparse plant community than any other factor. These plants are found normally in the 7-11" annual rain fall area. This area may experience occasional lake effect precipitation, however, the prevailing storms take moisture to the east and south east more often than depositing on this site.

Grazing was not a factor which impacted the summer growth of these plants found. It may be a factor in the winter for deer and cows, however, this would not be a problem for reseeding grasses and making a healthy community.